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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/937,779	07/02/2002	Anders Dahlqvist	0093/000003	7114

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KEIL & WEINKAUF
1350 CONNECTICUT AVENUE, N.W.
WASHINGTON, DC 20036

EXAMINER

KERR, KATHLEEN M

ART UNIT	PAPER NUMBER
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1652

DATE MAILED: 09/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/937,779	Applicant(s) DAHLQVIST ET AL.	
	Examiner Kathleen M Kerr	Art Unit 1652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-49 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Application Status

1. As amended on September 28, 2001, Claims 28-49 are pending in the instant application.

Restriction

2. Restriction is required under 35 U.S.C. § 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 C.F.R. § 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted. The below restriction is two-tiered; both a Group (A-H) and a sequence must be elected.

Group A, claim(s) 28-32, drawn to enzymes related to specific amino acid sequences (both amino acid sequences [Claims 28-31] and their encoding nucleotide sequences [Claim 32]).
Group B, claim(s) 33-45, drawn to nucleotide sequences, gene constructs, vectors, and transgenic cells related to specific nucleotide sequences.
Group C, claim(s) 40-45, drawn to transgenic organisms related to specific sequences.
Group D, claim(s) 46 and 48, drawn to processes for producing triacylglycerol using specific nucleotide sequences.
Group E, claim(s) 47, drawn to triacylglycerols.
Group F, claim(s) 48, drawn to processes for producing triacylglycerol using enzymes related to specific amino acid sequences.
Group G, claim(s) 49, drawn to processes for altering the oil content of a cell or organism using specific nucleotide sequences.
Group H, claim(s) 49, drawn to processes for altering the oil content of a cell or organism using specific amino acid sequences.

*** Further in Groups A-D and F-H, election of a specific sequence (nucleotide or protein) is required; this is the second tier of the restriction. This is NOT an election of species. Upon election of a specific sequence, not all the Claims of the elected Group will necessarily read on the elected invention.

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+++ On their face, each individual nucleotide sequence and its encoded amino acid sequence is considered distinct (13 amino acid sequences as found in Claim 31 and 19 nucleotide sequences as found in Claim 35, for example). Thus, only one pair (nucleotide and encoded protein - if a pair is applicable) of SEQ ID NOs should be elected in addition to an election of any of Groups A-D and F-H. However, wherein SEQ ID NOs are related as fragment and full-length open reading frame, Applicant should bring this to the Examiner's attention so that this type of subject matter may be rejoined together.

3. The inventions listed as Groups A-H, with a second tier of restriction dividing all distinct sequences, do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons.

The enzyme that is SEQ ID NO:2 (encoded by SEQ ID NO:1) has a particular structural feature that is the technical feature of the first Group. This technical feature does not define a contribution that the Group makes over the prior art (see IPER). Therefore, the technical feature of the first Group is not a special technical feature. Without a special technical feature, the first Group cannot share unity of invention with the other members of Group A. In particular, the technical features of the different sequences in Group A, namely their sequences, are not shared. The same is true for the distinct sequence members of Groups B-D and F-H, each having distinct sequences describing their technical feature, wherein the technical feature is not shared.

The enzymes of Group A do not share their technical feature with the nucleotides of Group B because the structures of the enzymes are distinct from the structures of the nucleotides. Specifically, enzymes are made of linear, contiguous amino acids that together fold into a particular three-dimensional structure that govern the enzyme's activity; nucleotides are made of linear, contiguous nucleic acid that together and in specific order, encode proteins.

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The enzymes of Group A do not share their technical feature with the transgenic organisms of Group C because the structures of the enzymes are distinct from the structures of the organisms. Specifically, enzymes are made of linear, contiguous amino acids that together fold into a particular three-dimensional structure that govern the enzyme's activity; organisms are multi-cellular structures encompassing proteins, nucleic acids, and numerous small molecules working together.

The enzymes of Group A do not share their technical feature with the methods of Groups D or G because the methods neither use nor make the enzymes.

The enzymes of Group A do not share their technical feature with the triacylglycerol of Group E because the structures of the enzymes are distinct from the structure of triacylglycerol. Specifically, enzymes are made of linear, contiguous amino acids that together fold into a particular three-dimensional structure that govern the enzyme's activity; triacylglycerol is a small molecule of defined structure.

The enzymes of Group A share their technical feature with the methods of Groups F and H, which are methods of using the enzymes. However, in the absence of a special technical feature, this different category of invention cannot be considered to share unity of invention with Group A.

The nucleotides of Group B share their technical feature with the transgenic organisms of Group C. However, these are different products based on their distinct structural features. Specifically, nucleotides are made of linear, contiguous nucleic acid that together and in specific order, encode proteins; organisms are multi-cellular structures encompassing proteins, nucleic acids, and numerous small molecules working together.

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The nucleotides of Group B share their technical feature with the methods of Groups D and G, which are methods of using the nucleotides. However, in the absence of a special technical feature, this different category of invention cannot be considered to share unity of invention with Group B.

The nucleotides of Group B do not share their technical feature with the triacylglycerol of Group E because the structures of the nucleotides are distinct from the structure of triacylglycerol. Specifically, nucleotides are made of linear, contiguous nucleic acid that together and in specific order, encode proteins; triacylglycerol is a small molecule of defined structure.

The nucleotides of Group B do not share their technical feature with the methods of Groups F or H because the methods neither use nor make the enzymes.

The transgenic organisms of Group C do not share their technical feature with the methods of Groups D, F, G, or H because the methods neither use nor make the transgenic organisms.

The transgenic organisms of Group C do not share their technical feature with the triacylglycerol of Group E because the structures of the nucleotides are distinct from the structure of triacylglycerol. Specifically, organisms are multi-cellular structures encompassing proteins, nucleic acids, and numerous small molecules working together; triacylglycerol is a small molecule of defined structure.

The triacylglycerol of Group E shares its technical feature with the methods of Groups D and F, which are methods of making the triacylglycerol. However, in the absence of a special

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technical feature, this different category of invention cannot be considered to share unity of invention with Group E.

The triacylglycerol of Group E does not share its technical feature with the methods of Groups G or H because the methods neither use nor make triacylglycerol.

The methods of Groups D and F share a technical feature of making triacylglycerol. However, this does not constitute a special technical feature contributing over the prior art. The distinct components of the Groups, the sequences, do not share structure as noted above and cannot, therefore, constitute a special technical feature to share unity of invention.

The methods of Groups G and H share a technical feature of altering oil content. However, this does not constitute a special technical feature contributing over the prior art. The distinct components of the Groups, the sequences, do not share structure as noted above and cannot, therefore, constitute a special technical feature to share unity of invention.

The methods of Groups D and G share a technical feature of using nucleotide sequences; however, this is not a special technical feature that can support unity of invention as noted above for the sequences themselves.

The methods of Groups F and H share a technical feature of using enzyme sequences; however, this is not a special technical feature that can support unity of invention as noted above for the sequences themselves.

Election

4. Applicant is advised that the reply to this requirement to be complete must include an election of the invention (Group **and** sequence) to be examined even though the requirement be traversed (37 C.F.R. § 1.143).

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Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 C.F.R. § 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 C.F.R. § 1.48(b) and by the fee required under 37 C.F.R. § 1.17(i).

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kathleen M Kerr whose telephone number is (571) 272-0931. The examiner can normally be reached on Monday through Friday, from 9:00am to 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathupura Achutamurthy can be reached on (571) 272-0928. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kathleen M Kerr
Primary Examiner
Art Unit 1652

September 7, 2004